

## **REMARKS**

This responds to the Office Action mailed on July 28, 2006. No claims are amended, canceled, or added. Thus, claims 1-20 remain pending in this application. Of these pending claims, claims 1-2, 6-8 and 16-20 are currently being considered.

### **§103 Rejection of the Claims**

Claims 1 and 6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Brennan et al. (US 6,240,192).

The rejection states: *the signal is output to a filterbank and a programmable DSP, where the signals undergo gain adjustments accordingly and less distortions of caused by prior signal processing (col. 3, lines 18-67, col. 4, lines 1-43); wherein it well known in the art that modulation and sampling of audio signal constitutes distortion.*

Applicant respectfully traverses, and asserts that the combination does not show or suggest all of the claimed subject matter. Thus, a *prima facie* case has not been made to support a §103 rejection. For example, the rejection does not refer to “apparent modulation” in addressing the claims, and Applicant cannot find any showing or suggestion in Brennan et al. that distortions arising from apparent modulation are inhibited. One of ordinary skill in the art would understand “apparent modulation” upon reading and comprehending the application, including page 5 line 13 to page 6 line 3, page 7 line 28 to page 9 line 8 of Applicant’s specification.

At col. 4 lines 24-43, Brennan et al. refers to downsampling or decimation of signal samples, indicates that the maximum amount of decimation corresponding to sampling at the Nyquist rate creates aliasing distortion, and indicates that, rather than applying maximum decimation, the signal is oversampled by a factor OS times the theoretical minimum sampling rate to provide a compromise, with larger values providing less distortion at the expense of greater computation. Applicant asserts that decimation of a signal is distinct from the claimed subject matter. The decimator of Brennan et al. apparently reduces the number of signal samples, which neither shows or suggests smoothing an envelope of the input signal so as to inhibit distortions arising from apparent modulation of the input signal due to sampling of the input signal.

Applicant respectfully asserts that the combination does not show or suggest all of the claimed subject matter. If official notice is being taken for the missing claimed subject matter, the rejection should provide an explicit basis with a technical line of reasoning sufficient to instantaneously and unquestionably demonstrate that the asserted elements are in fact well known. Applicant respectfully traverses any such official notice, and requests the Examiner to either provide a reference that describes such elements or provide an affidavit pursuant to 37 CFR §1.104(d)(2). Further, Applicant asserts that the claimed subject matter is not inherent in the filterbank and programmable DSP of Brennan et al. Inherency requires evidence that makes clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill in the art. Applicant respectfully submits that the rejection has not provided such extrinsic evidence, nor has the rejection provided a convincing line of reasoning that the claimed subject matter would be recognized as being inherent in the Brennan et al. reference by persons of ordinary skill.

With respect to independent claim 1, Applicant is unable to find, among other things, in the proposed combination a showing or suggestion of a hearing aid comprising, among other things, a digital processor to process the input signal at a gain, where the processor includes an inhibitor to inhibit distortions and an adjuster to adjust the gain of the input signal, and where the inhibitor smoothes an envelope of the input signal so as to inhibit distortions arising from apparent modulation of the input signal due to sampling of the input signal, as recited in the claim.

With respect to independent claim 6, Applicant is unable to find, among other things, in the proposed combination a showing or suggestion of a method comprising, among other things, sampling an input signal, and smoothing an envelope of the input signal where the smoothing inhibits distortions arising from apparent modulation of the input signal produced by sampling the input signal, as recited in the claim.

With respect to claim 16, Applicant is unable to find, among other things, in the proposed combination a showing or suggestion of a hearing aid for processing an input signal comprising, among other things, a sampler to sample the amplified input signal, a detector to form a smooth envelope that is rectified, and an adjuster to adjust the gain of the preamplifier if the smooth envelope is greater than a threshold to reduce distortions due to an apparent modulation arising

from sampling of the amplified input signal, as recited in the claim. Claim 17 depends on claim 16, and is asserted to be in condition for allowance with claim 16.

*Allowable Subject Matter*

Claims 2, 7-8 and 18-20 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 2 depends on claim 1, and is asserted to be in condition for allowance with claim 1. Claims 7-8 depend on claim 6, and are asserted to be in condition for allowance with claim 6. Claims 18-20 depend on claim 16, and are asserted to be in condition for allowance with claim 16.

*Request for Consideration of Claims 11-15 (Group IV)*

Applicant previously requested that claims 11-15 (Group IV) be examined with Group I, as it is believed that the search and examination of these groups would not require additional effort by the Office. Applicant respectfully submits that an explanation has not been provided how the search and examination of Group IV would require additional effort. As such, Applicant respectfully repeats the request to consider Group IV (claims 11-15) with Group I.

*Request for Consideration of Non-Elected Species (Claims 3-5 and 9-10)*

Applicant requests consideration and allowance of withdrawn claims 3-5 upon allowance of independent claim 1. Applicant requests consideration and allowance of withdrawn claims 9-10 upon allowance of independent claim 6 and intervening claim 7.

### CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6960 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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**CERTIFICATE UNDER 37 CFR 1.8:** The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 27 day of December 2006.

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